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ENGINEERING STUDIES

ON

PROCESSING OF OILS AND MEALS U. S. DEPT. OF AGRICULTURE
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A List of Publications and Patents, 1962-1969
Northern Regional Research Laboratory

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UNITED STATES DEPARTMENT OF AGRICULTURE

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This list of publications and patents represents 8 years of research work. It supersedes previous list issued as ARS 71-24, Suppl. 107. References are arranged chronologically except when they form a series of papers under the same general title or when the subject matter is closely related. All authors cited are members of the Northern Utilization Research and Development Division; exceptions are noted in footnotes or affiliation cited after author(s)' name.

Other lists of publications are available: Compositional Studies on Oilseeds, Oils, and Meals, ARS 71-39; Edible Soybean Oil and Related Studies, ARS 71-41; Edible Soybean Protein and Related Studies, ARS 71-42; Chemically Modified Oil Products for Industrial Uses, ARS 71-43; Reviews and General Articles on Oilseed Crops Research, ARS 71-44; Miscellaneous Studies Related to Soybean and Other Oilseed Crops, ARS 71-45.

Northern Utilization Research and Development Division
Agricultural Research Service
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ENGINEERING STUDIES ON PROCESSING OF OILS AND MEALS

1962-1969

Publications

[Publications marked (*) are not available for distribution. When requesting specific reprints, please order by number. Use your zip code.]

Soybean Protein Products

- 1368 FLASH DESOLVENTIZING DEFATTED SOYBEAN MEALS WASHED WITH AQUEOUS ALCOHOLS TO YIELD A HIGH-PROTEIN PRODUCT
G. C. Mustakas, L. D. Kirk, and E. L. Griffin, Jr.
J. Amer. Oil Chem. Soc. 39(4): 222-226. April 1962
- 1602 STABLE FOAMS FROM UNHYDROLYZED SOYBEAN PROTEIN
A. C. Eldridge, P. K. Hall, and W. J. Wolf
Food Technol. 17(12): 120-123. December 1963
- 1621 A MOULD INHIBITOR IN SOYBEANS
C. W. Hesseltine, R. DeCamargo, and J. J. Rackis
Nature (London) 200(4912): 1226-1227. December 1963
- 1733 PRODUCTION AND NUTRITIONAL EVALUATION OF EXTRUSION-COOKED FULL-FAT SOYBEAN FLOUR
G. C. Mustakas, E. L. Griffin, Jr., L. E. Allen,¹ and O. B. Smith²
J. Amer. Oil Chem. Soc. 41(9): 607-614. September 1964
- 2110 FULL-FAT SOYBEAN FLOURS BY CONTINUOUS EXTRUSION COOKING
Gus C. Mustakas, Edward L. Griffin, Jr., and Virgil E. Sohns
In World Protein Resources, ed. Robert F. Gould, a symposium sponsored by the Division of Agricultural and Food Chemistry, American Chemical Society, Atlantic City, N.J., September 13-15, 1965. Advan. Chem. Ser. 57: 101-108. (1966)
- 2430 HOW EXTRUSION COOKING VARIES PRODUCT PROPERTIES
H. F. Conway, E. B. Lancaster, and G. N. Bookwalter
Food Eng. 40(11): 102-104. November 1968
- 2451 GELATINIZATION OF CORN GRITS BY ROLL- AND EXTRUSION-COOKING
R. A. Anderson, H. F. Conway, V. F. Pfeifer, and E. L. Griffin, Jr.
Cereal Sci. Today 14(1): 4-7, 11-12. January 1969

¹UNICEF, United Nations, New York, N.Y.

²Wenger Mixer Manufacturing, Kansas City, Mo.

- 2144 A SIMPLE METHOD FOR MAKING FULL-FAT SOY FLOUR
W. J. Albrecht, G. C. Mustakas, J. E. McGhee, and
E. L. Griffin, Jr.
Cereal Sci. Today 12(3): 81-83. March 1967
- 2225 FULL-FAT SOY FLOUR BY A SIMPLE PROCESS FOR VILLAGERS
G. C. Mustakas, W. J. Albrecht, G. N. Bookwalter, and
E. L. Griffin, Jr.
U.S. Agr. Res. Serv., ARS 71-34, 11 pp. August 1967
- 2603 LIPOXIDASE DEACTIVATION TO IMPROVE STABILITY, ODOR AND FLAVOR
OF FULL-FAT SOY FLOURS
G. C. Mustakas, W. J. Albrecht, J. E. McGhee, L. T. Black,
G. N. Bookwalter, and E. L. Griffin, Jr.
J. Amer. Oil Chem. Soc. 46(11): 623-626. November 1969
- 2042 RATE STUDIES ON ATMOSPHERIC STEAMING AND IMMERSION COOKING
OF SOYBEANS
W. J. Albrecht, G. C. Mustakas, and J. E. McGhee
Cereal Chem. 43(4): 400-407. July 1966
- 2090 SOYBEAN TRYPSIN INHIBITORS: THEIR INACTIVATION DURING MEAL
PROCESSING
J. J. Rackis
Food Technol. 20(11): 102-104. November 1966
- 167-F EFFECT OF AUTOCLAVING ON SUGARS OF DEFATTED SOYBEAN FLAKES
FROM SELECTED VARIETIES
Sin'itiro Kawamura, Minoru Tada, and Noriko Irie
Kagawa University, Takamatsu, Japan³
Tech. Bull. Fac. Agr. Kagawa Univ. (Kagawa Daigaku Nogakubu
Gakuzyutu Hokoku) 18(2): 147-153. March 1967
- 226-F * SUGARS AND OTHER COMPONENTS OF "KINAKO" OR PARCHED FULL-FAT
SOYBEAN FLOUR [In Japanese. English abstract, p. 174]
Sin'itiro Kawamura
Kagawa University, Takamatsu, Japan³
J. Jap. Soc. Food Nutr. (Eiyo To Shokuryo) 20(3): 174-176.
September 1967
- 241-F * EFFECTS ON SUGARS OF STEAMING OF DEFATTED SOYBEAN FLAKES AS THE
FIRST PROCESS FOR PREPARING SOY SAUCE [In Japanese. English
abstract, p. 30]
Sin'itiro Kawamura and Masahiro Hukagawa
Kagawa University, Takamatsu, Japan³
J. Food Sci. Technol. (Tokyo) 15(1): 30-33. January 1968

³Report of research work supported with funds provided by the U.S. Department of Agriculture under the authority of U.S. Public Law 480, 83d Congress, and sponsored by the Northern Utilization Research and Development Division.

- 242-F * CHANGES OF SUGARS AND DECREASE IN AVAILABLE LYSINE ON AUTOCLAVING DEFATTED SOYBEAN FLAKES [In Japanese. English abstract, p. 478]
 Sin'itiro Kawamura, Tadasi Kasai, and Akiko Honda
 Kagawa University, Takamatsu, Japan³
 J. Jap. Soc. Food Nutr. 20(6): 478-481. March 1968
- 215-F * ISOLATION OF SOYBEAN PROTEIN: EFFECT OF PROCESSING CONDITIONS ON YIELDS AND PURITY
 Uri Cogan, Anina Yaron, Zeki Berk, and Sylvia Mizrahi
 Technion--Israel Institute of Technology, Haifa³
 J. Amer. Oil Chem. Soc. 44(5): 321-324. May 1967
- 238-F EFFECT OF PROCESSING CONDITIONS ON THE NUTRITIVE VALUE OF ISOLATED SOYBEAN PROTEINS
 Uri Cogan, Anina Yaron, Zeki Berk, and Gideon Zimmermann
 Technion--Israel Institute of Technology, Haifa³
 J. Agr. Food Chem. 16(2): 196-198. March-April 1968

Potential Oilseed Crops Products

- 1422 MUSTARD SEED PROCESSING: BLAND PROTEIN MEAL, BLAND OIL, AND ALLYL ISOTHIOCYANATE AS A BY-PRODUCT
 G. C. Mustakas, L. D. Kirk, and E. L. Griffin, Jr.
 J. Amer. Oil Chem. Soc. 39(8): 372-377. August 1962
- 1577 ENZYMATIC PROCESS FOR MUSTARD SEED TO PRODUCE OIL, MEAL, AND ALLYL ISOTHIOCYANATE
 G. C. Mustakas, E. L. Griffin, Jr., E. A. Gastrock,⁴
 E. L. D'Aquin,⁴ E. J. Keating,⁴ and E. L. Patton⁴
 Biotechnol. Bioeng. 5(1): 27-39. March 1963
- 1690 MUSTARD SEED PROCESSING: SIMPLE METHODS FOR FOLLOWING HEAT DAMAGE TO PROTEIN MEALS
 J. E. McGhee, L. D. Kirk, and G. C. Mustakas
 J. Amer. Oil Chem. Soc. 41(5): 359-362. May 1964
- 1730 MUSTARD SEED PROCESSING: ESSENTIAL OIL COMPOSITION
 L. D. Kirk, L. T. Black, and G. C. Mustakas
 J. Amer. Oil Chem. Soc. 41(9): 599-602. September 1964
- 1773 MUSTARD SEED PROCESSING: IMPROVED METHODS FOR ISOLATING THE PUNGENT FACTOR AND CONTROLLING PROTEIN QUALITY
 G. C. Mustakas, L. D. Kirk, V. E. Sohns, and E. L. Griffin, Jr.
 J. Amer. Oil Chem. Soc. 42(1): 33-37. January 1965

⁴Southern Regional Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, New Orleans, La.

- 1729 ACTIVATION AND SPECIFICITY OF *CRAMBE ABYSSINICA* SEED LIPASE
H. L. Tookey and I. A. Wolff
J. Amer. Oil Chem. Soc. 41(9): 602-604. September 1964
- 1909 PREPRESS-SOLVENT EXTRACTION OF *CRAMBE*: FIRST COMMERCIAL
TRIAL RUN OF NEW OILSEED
G. C. Mustakas, G. Kopas,⁵ and N. Robinson⁵
J. Amer. Oil Chem. Soc. 42(10): 550A, 552A, 554A, 594A.
October 1965
- 1921 EVALUATION OF ENZYME-MODIFIED, SOLVENT-EXTRACTED *CRAMBE* SEED
MEAL BY CHEMICAL ANALYSES AND RAT FEEDING
H. L. Tookey, C. H. VanEtten, J. E. Peters, and I. A. Wolff
Cereal Chem. 42(6): 507-514. November 1965
- 2000 *CRAMBE* SEED PROCESSING: FILTRATION-EXTRACTION ON A BENCH SCALE
L. D. Kirk, G. C. Mustakas, and E. L. Griffin, Jr.
J. Amer. Oil Chem. Soc. 43(5): 334-336. May 1966
- 2064 *CRAMBE* SEED PROCESSING: IMPROVED FEED MEAL BY AMMONIATION
L. D. Kirk, G. C. Mustakas, and E. L. Griffin, Jr.
J. Amer. Oil Chem. Soc. 43(9): 550-555. September 1966
- 2309 *CRAMBE* SEED PROCESSING: IMPROVED FEED MEAL BY SODA ASH TREATMENT
G. C. Mustakas, L. D. Kirk, E. L. Griffin, Jr., and D. C. Clanton⁶
J. Amer. Oil Chem. Soc. 45(1): 53-57. January 1968
- 2185 BRASSYLIC ACID FROM OZONOLYSIS OF ERUCIC ACID
H. J. Nieschlag, I. A. Wolff, T. C. Manley,⁷ and R. J. Holland⁷
Ind. Eng. Chem. Prod. Res. Develop. 6(2): 120-123. June 1967

Patents

[These patents are assigned to the Secretary of Agriculture. Printed copies of patents may be obtained only by purchase (50 cents each) from the Commissioner of Patents, U.S. Patent Office, Washington, D.C. 20231. Order by number, do not send stamps. Use your zip code.]

Soybean Protein Products

PRODUCTION OF UNDENATURED DEBITTERED SOYBEAN PRODUCT
Gus C. Mustakas, Edward L. Griffin, Jr., and Larry D. Kirk
U.S. Patent 3,023,107. February 27, 1962

⁵Pacific Vegetable Oil Corporation, San Francisco, Calif.

⁶North Platte Station, University of Nebraska, North Platte

⁷The Welsbach Corporation, Philadelphia, Pa.

PROCESS OF PRODUCING SOYBEAN PROTEINATE

Arthur C. Eldridge and Arlo M. Nash

U.S. Patent 3,218,307. November 16, 1965

METHOD OF PREPARING EDIBLE SOYBEAN CHARACTERIZED BY GREATLY ENHANCED
WATER ABSORPTION

Gus C. Mustakas and Edward L. Griffin, Jr.

U.S. Patent 3,268,503. August 23, 1966

PROCESS FOR PREPARING DEBITTERED FULL-FAT SOYBEAN MATERIALS

Gus C. Mustakas and Edward L. Griffin, Jr.

U.S. Patent 3,290,155. December 6, 1966

Potential Oilseed Crops Products

METHOD OF OBTAINING DETOXIFIED MUSTARD SEED PRODUCTS

Gus C. Mustakas and Larry D. Kirk

U.S. Patent 3,106,469. October 8, 1963

METHOD OF OBTAINING DETOXIFIED MEAL FROM SEEDS CONTAINING BOTH
ISOTHIOCYANATE AND THIOOXAZOLIDONE

Gus C. Mustakas and Larry D. Kirk

U.S. Patent 3,173,792. March 16, 1965

PROCESS FOR PRODUCING UNDECANEDIOIC ACID FROM PLANT SOURCES

Kenneth L. Mikolajczak

U.S. Patent 3,217,046. November 9, 1965

METHOD OF PREPARING A WAX ESTER SUBSTITUTE FOR JOJOBA OIL

Thomas K. Miwa and Ivan A. Wolff

U.S. Patent 3,226,406. December 28, 1965

PROCESS FOR DETOXIFYING AND DEBITTERING THE SEEDS OF *CRAMBE ABYSSINICA*

Gus C. Mustakas and Larry D. Kirk

U.S. Patent 3,391,000. July 2, 1968

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